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Clinical practice

One model of healthcare provision lessons learnt through clinical governance

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ABSTRACT

Aim: Clinical Governance describes a systematic approach to maintaining and improving the quality of patient care. Risk management includes a themes analysis of clinical incidents and positive interventions with the resulting information disseminated to staff through personal performance plans, and publication and development training workshops. Our model of healthcare provision utilises doctors, nurses and paramedics to assess individuals in custody and this paper discusses the implementation of clinical risk management within this setting.

Method: A description of the model of healthcare provision, together with a themes analysis was undertaken for all clinical incidents received by the clinical team. Each incident receives an individual response and is discussed within the clinical risk management committee. From the review of each event, learning outcomes are identified and the information captured on a database. The information is analysed for reoccurring themes and further measures are introduced to ensure a high standard of healthcare provision to all counties.

Findings: Of the 86,184 patient/detainee episodes from 11 county forces, from January 2009–December 2009, 159 clinical incidents and positive interventions were generated. These were categorised into *Clinical Near Misses* – 39, *Prescribing issues* – 38, *Health and Safety matters* – 13, *Organisational matters* – 23, *Positive Interventions* – 21 and *Professional issues* – 25.

Conclusion: Risk management, with a regular review of clinical incidents is an essential part of clinical governance especially when working in a multidisciplinary team providing safe and effective custody healthcare. This analysis contributes to the knowledge base in clinical forensic medicine and supports the importance of identifying educational requirements for staff, working in a multiagency partnership and continuous monitoring of the quality of care for detainees.

1. Introduction

Clinical Governance describes a systematic approach to maintaining and improving the quality of patient care.[1] The underpinning elements of clinical governance are clinical effectiveness, clinical audit, openness, risk management, education & training and research & development.[2]

The provision of medical services to detainees in police custody has undergone radical change in recent years. Our model of healthcare provision utilises doctors, nurses and paramedics to assess individuals in custody and this paper discusses the implementation of clinical risk management within this setting.

G4S Forensic & Medical Services (G4SFMS), formerly Essex Medical and Forensic Services, was set up in 2004 by one of the authors (AC) in response to a perceived need for the provision of healthcare to detainees in police custody. This themes analysis is part of the clinical governance and risk management framework[3] established by the company as a proactive approach to the identification of risk and improvement in overall quality of clinical care. We recognise that all authors of this paper have an interest in the company providing the service which we are describing and we have outlined our affiliations in the conflict of interest statement. It has recently been highlighted that we all have bias[4] and we fully acknowledge this. However the changes in the provision of clinical forensic medical services have been controversial and this original article attempts to examine an aspect of this area of topical interest.

Much of the recent change to forensic medical services has been the result of the paucity of skilled forensic physicians (police

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surgeons, forensic medical examiners, forensic medical officers) to give dedicated time to the provision of clinical forensic medical services.[5] The complexity, and therefore cost, of providing healthcare to detainees has also been highlighted as a driver for change.[6,33] A further change to custody care provision came with a massive increase in calls for medical assessment following the implementation of a compulsory risk assessment of all those detained by the police in custody after the report of the working group into first aid training set up by the Association of Chief Police Officers (ACPOs) in 1999.[7]

It was also recognised that historically there had been a lack of management information with police forces having limited data on the pattern and cost of medical services and concerns with regard to training and quality.[8] The Audit Commission in 1998[9] recommended that police authorities collect and analyse information on demand and workload patterns for forensic medical services and called for better training for all those involved in custody care with consideration of alternative service provision.

As far back as 1993 The Royal Commission recommended a working party to look into the valuable work being performed by doctors in this area of practice.[10] The Commission considered research by Robertson[11] that the nature of the doctor's work had changed considerably over the years especially since the introduction, in 1986, of the Police and Criminal Evidence Act of 1984 (PACE). The Royal Commission in its deliberation had also considered the system of care used in Melbourne, Australia where nurses were used to provide healthcare for detainees in police custody.[12]

The Home Office working party was set up in 1996, publishing a number of recommendations in 2001 to improve the quality of medical services, including amending the PACE codes of practice to allow nurses a wider role in the medical care of those in police detention.[13] The Kent Constabulary Custody Nurse scheme commenced in January 2000 and an assessment was carried out in 2001.[14] The report endorsed widening the role of nurses and appropriately trained healthcare professionals whilst highlighting concerns with regard to the confidentiality of medical information obtained by the nurses in the course of their work and the perceived lack of independence from police authorities.

The National Protocol on Custody Care, published in April 2003 introduced the term "Healthcare Professional" (HCP) which refers to a 'clinically qualified person, who is working within the scope of practice as determined by their relevant professional body and who is registered with that body as competent to practice'.[15] This term was first introduced into the Codes of Practice under PACE in April 2003.[16] Furthermore in 2006 detailed guidance was issued setting the standards expected in dealing with those detained by the police.[17]

These legislative changes have enabled multidisciplinary teams comprising forensic physicians, custody nurses and paramedics to provide healthcare in police stations. However the importance of initial training, development training including attainment of higher relevant qualifications, clinical audit, and review of critical incidents – all aspects of clinical governance – should be included in any service provision. Good practice guidelines for forensic physicians have been used to attempt to support and promote best practice in clinical forensic medicine in a number of Constabularies.[18] Recently National Occupational Standards have been set for all the functions required to deliver healthcare services in police custody, regardless of the model of service provision.[19] The Bradley Report[20] further reiterated the importance of a seamless service for offenders and the difficulty in accessing information from NHS sources and has suggested that the NHS should commission the custody health service in order to ensure that the quality of care in custody is subject to the same governance and performance measures as NHS services. This call has been echoed in Baroness Corston's recent report into women with particular vulnerabilities in the criminal justice system[21] and the 2007 Department of Health consultation on developing an Offender Health and Social Care Strategy.[22]

A review of research into the substitutability of nurses for doctors suggested that 25–70% of the work undertaken by doctors might be moved to nurses.[23] Nurses have provided an alternative service in primary care and secondary care[24–26] and it has been shown that appropriately trained nurses can produce as high quality care as doctors and achieve as good health outcomes for patients. Doctors' workload may remain unchanged, either because there was previously an unmet need that nurses now fulfil, or because nurses generate demand for medical care where previously there was none. Few studies contained detailed information on the nature of nurses' training for the specific role under investigation, making it impossible to draw any conclusions as to whether or how training affects outcomes, and there is less research into the role of paramedics when substituting for doctors.[27] The role of nurses and paramedics in the custodial situation is a relatively new initiative (since 2003) and there is limited research available on this development and what lessons can be learnt from looking at extended roles in other fields.

A previous study has suggested that nurses working within the custody environment have been shown to provide a standard of care that complements that of the traditional doctor model.[28] The use of paramedics in this field is less researched although paramedics are working as "appropriately trained healthcare professionals" in police custody in Surrey, England[29] and emergency care practitioners are used in a variety of environments.[30] Mason et al. have recently shown that paramedics can provide a clinically effective alternative to standard ambulance transfer and treatment in emergency department.[31] However although these results are positive, they cannot be generalised beyond the schemes evaluated and further trials have been advised before further costly expansions occur.[32]

Any organisation providing high quality care has to show that it is meeting the needs of the population it serves and therefore as a healthcare provider G4SFMS has introduced robust clinical governance which ensures that systems are in place to ensure the delivery of safe, high quality care. Risk management forms a key aspect and includes a themes analysis of clinical incidents and positive interventions with the resulting information disseminated to staff through performance plans, a publication "Lessons Learnt" and development training workshops.

2. Description of model of healthcare provision and clinical governance structure

2.1. Call management

When a medical need is identified by custody staff, the call centre is contacted. The call centre staff are trained to be aware of the common clinical and forensic presentations occurring in custody. Protocols provide staff with background information on the significant issues, the PACE requirements and the minimal amount of information required from custody staff, to ensure that the calls are triaged and the appropriate healthcare professional is deployed for the custody request.

Nurses and paramedics manage the majority of requests for a custody visit. Forensic Medical Examiners (FMEs) examine all complainants of sexual assault; perform the formal assessments of detainees under the Mental Health Act including Section 136 assessments; examinations under Section 4 of the Road Traffic Act and take blood samples at hospital premises as well as examination of detainees subject to TASER® and police officer post shooting incidents. All triage enquiries by custody staff are dealt with by the FME who provided support for the nurses and paramedics in complex cases.

2.2. HCP training

Training is given to all appropriately qualified nurses and paramedics, which comprises a two day theoretical induction course and a further shadowing period. This enables the individual to practice as a 'Level 1 HCP', where all assessments are discussed with the duty FME. Once the HCP has completed fifty assessments, an assessment of practice is carried out. This includes a review of notes, ensuring a full range of cases have been seen and completion of a competency logbook where their practice is assessed by a senior HCP (level 4). The HCP can then progress to 'Level 2', which enables them to practice autonomously based upon protocols, within their own competency, with advice from the duty FME as required. To progress further to a 'Level 3 HCP' a minimum of 150 assessments must have been performed at an adequate standard and a further one day period of training is given to be able to take forensic samples. All staff are supported by a duty FME who is available at all times for telephone advice and clinical supervision provided by the level 4 HCPs and senior clinical team.

The FMEs are trained with the nurses and paramedics on the two day induction course and then receive a third day's training covering the areas specifically relating to their practice as outlined above and including forensic sampling. Additional training must be undertaken to perform examinations of adult and/or child complainants of sexual assault. The FMEs also undergo a period of shadowing pre- and post-induction course.

Continuing educational needs are addressed by monthly meetings and individual reviews. Custody staff and the HCPs are encouraged to report any critical incident data to a nominated member of staff and an investigation is carried out with any learning outcomes disseminated via email and at meetings.

2.3. Record keeping

All information recorded from the call handlers is stored on a computer system and linked with the relevant contemporaneous notes (including proforma, police documentation, NSPIS records) and any subsequent statement. The computer system has the ability to identify call type, HCP involved and response time to attend custody. Additional systems enable statement requests and court attendance to be identifiable.

2.4. Clinical governance

A clinical governance policy forms the overarching structure to ensure the principles of clinical effectiveness, clinical audit, openness, risk management, education & training and research & development are adhered to.

The G4SFMS Clinical Governance Committee consist of key personnel, including the Clinical Director, Operations Manager other clinical leads for the FMEs, nurses and paramedics and also has external representation from Dr Margaret Stark, Academic Dean of the Faculty of Forensic and legal Medicine and most recently Dr Rory McCrae, former chair of Epping Forest Primary Care Trust. In addition, the Medicines Management Committee is chaired by Paula Wilkinson, Chief Pharmacist, Mid Essex PCT.

These groups oversee our clinical governance processes which include ensuring all protocols, procedures and guidance are up to date and are informed by NICE, DoH, HO and FFLM guidance. Clinical audit is ongoing, and includes Medicines Management audit which ensures safe use of PGDs, an audit of the clinical proforma (contemporaneous notes), forensic sampling audit and ad hoc audits such as use of Section 136 as required and as appropriate. Reviews of recruitment criteria and ongoing education/training: induction, development, appraisal including revalidation are all part of the ongoing review of the clinical governance team.

The risk management process is an integral element of clinical governance and informs personal development plans, appraisal and revalidation, education and policies and protocols. Audit subjects have been identified as a result if the risk management reporting structure.

3. Clinical incidents and positive interventions report and analysis 2009

A themes analysis was undertaken of all clinical incidents received by our clinical team from January 2009 to December 2009 inclusive. From the review of each event, learning outcomes are identified and the information captured on a database. These were examined for reoccurring themes and further measures introduced to ensure a high standard of healthcare provision to all counties. Our reporting structure includes clinical and non-clinical staff and outside agencies are also encouraged to report.

Presently G4SFMS hold contracts with 11 forces: Bedfordshire, Cambridgeshire, Devon & Cornwall, City of London, Essex, Gloucestershire, Hampshire, Lincolnshire, Norfolk, Suffolk and Wiltshire. In the stated time period, 86,184 patient/detainee episodes were facilitated by our staff.

Nurses and paramedics manage the majority of requests (65%) for a custody visit (Table 1).

159 clinical incidents or positive interventions were made to the G4SFMS clinical risk committee.

4. Incident and reporting processes in G4SFMS

Following an incident, near miss or positive intervention, the staff involved will take any necessary immediate action and report to the clinical governance team on the Incident Reporting Form.

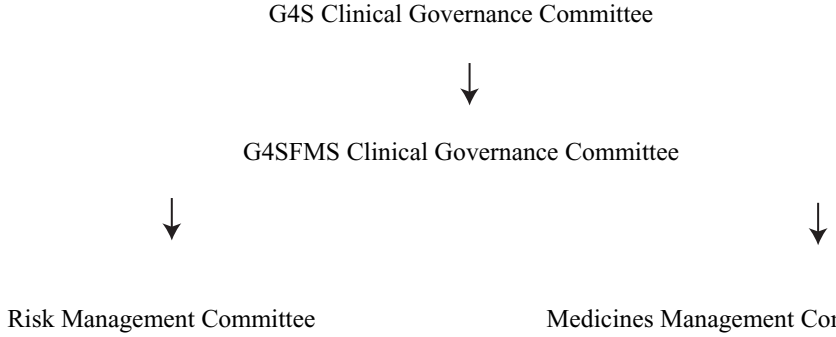

Table 1
Break down of types of medical assessments and distribution to healthcare professionals.

Count of telephone advice requested	Type of HCP		
Request type	Doctor	HCP	Grand total
Chronic condition	4207	10,075	14,282
CS spray	87	214	301
Death – sudden	123	0	123
Death suspicious	38	0	38
Detainee refuses to give reason	51	203	254
Forensic samples – non-sexual offence	281	186	467
Forensic samples – SOE complainant	1272	0	1272
Forensic samples – SOE suspect	427	496	923
HOPO prison production	32	69	101
Injuries to DP	3221	9864	13,085
Injuries to police	145	638	783
Intimate search	47	0	47
Intoxicated (alcohol)	1825	5479	7304
Intoxicated (other substances)	688	1935	2623
Mental health formal assessment	661	195	856
Mental health informal assessment	1976	156	2132
Mental health non-acute	2631	7623	10,254
Minor ailment	3230	5175	8405
RTA blood hospital – conscious DP	535	0	535
RTA blood hospital – unconscious DP	93	0	93
RTA blood sample Section 4	487	0	487
RTA blood sample Section 5	522	1304	1826
Suicide risk	196	573	769
Taser	79	0	79
Verification/administration of medication	4232	1409	5641
Withdrawing – alcoholic	1209	3619	4828
Withdrawing – drug dependency	2118	6558	8676
Grand total	30,412	55,772	86,184

Formal and Informal Mental Health Assessments are usually seen with a co-ordinated approach with the mental health teams, however if there is to be a delay, a welfare check to ensure no physical causes of their symptoms is carried out in the interim by an HCP.

The clinical governance team also facilitates emails and telephone calls to ensure a comprehensive reporting structure.

The forms are initially checked and the clinical team/operational team will instigate any further action as necessary. All individuals that require an immediate response and/or demonstrate poor working practices are contacted and a development plan put into action on a case by case basis.

All incidents are reviewed in the Risk Management Committee with learning outcomes identified and published in "Learning the Lessons". A response is sent to all individuals highlighting a concern.

Consideration is given to reporting any for patient safety incidents to the National Patient Safety Agency.

All incidents are entered onto the G4SFMS risk management database and the Clinical Director studies all clinical incidents, instigating any further immediate action felt necessary and looking for overall trends.

4.1. Analysis by area

There were no specific issues that affected only one county.

4.2. Analysis by causation

4.2.1. Clinical near misses

The key learning outcomes demonstrate that a multidisciplinary approach to clinical governance is required, involving all agencies such as (Tables 2 and 3):

- Police training issues – with regard to poor use of telephone triage to assist custody staff in making appropriate decisions and poor selection by the police of the appropriate venue for detainees to be seen. Ie A&E.
- Additional training requirements were identified for our own staff regarding mental health issues, including Section 136 assessments, but also the need for closer partnerships with the Acute Mental Health Teams is required to understand the complex needs an offender may exhibit. The G4SFMS staff often had to work with limited background knowledge of cases having little access to medical records.

Table 2
Break down of incidents by causation.

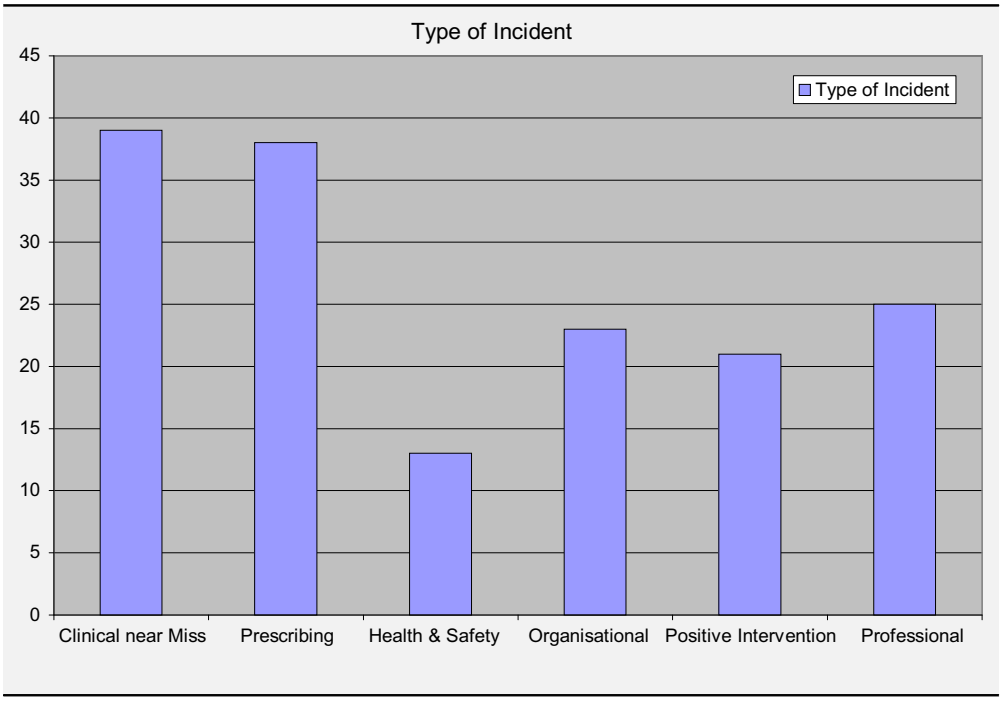

Table 3
Break down of clinical incidents – 39 clinical near misses. Only incidents which occurred more than once were analysed in more detail except for the death??

1 × Death in custody	This incident involved an individual who arrived in custody and whilst been booked in, stopped breathing and required resuscitation. G4SFMS staff were on site and involved in the resuscitation attempt.
3 × Chest pain	3 detainees complained of chest pain which was not telephone triaged and the wait to see an individual HCP resulted in a delay in seeking medical treatment. In one case, the detainee did indeed have an MI and there was a delay in receiving medical treatment appropriately.
6 × Mental Health	2 individuals detained under a Section 136 were released inappropriately from the place of safety after being seen by the HCP only, on telephone advice from the FME. 2 individuals detained under a Section 136 were released by an FME despite being intoxicated at the time of assessment and both resulted in complaints from the mental health teams. A mental health assessment cannot be conducted on an intoxicated individual. 2 individuals were refused to be seen by the mental health team.
5 × Co-morbidity and head injury	5 detainees had co-morbidity issues, including 2 head injuries in intoxicated individuals and these were not referred for either telephone triage or a visit resulting in a clinical incident form being raised. These were felt to be near misses as they were seen later in their stay and were unwell i.e. very high blood pressure, high blood glucose and head injury.
3 × Not fit to detain	3 detainees were either refused admission at A&E or pronounced fit to be taken to custody by ambulance staff. These incidents included a serious wound in an aggressive individual; an unstable hyperglycaemic detainee and a detainee with a head injury.
3 × Diabetes	3 detainees received insulin without food and required hospitalisation due to hypoglycaemia.
4 × Missed fractures	4 detainees had missed fractures: 2 hand fractures, 1 spinal fracture and 1 elbow fracture. These were all in the presence of alcohol. The spinal fracture and elbow fracture were suspected on a review assessment in custody where the injuries had not previously been declared and therefore no action could have taken place. The hand injuries were recommended for review on release.
2 × Pregnant methadone users	2 detainees with methadone prescription were managed on dihydrocodeine. It was felt in both these cases this was inappropriate management.
2 × Epilepsy	2 detainees had seizures in the custody environment, one waited 45 min for an ambulance with episodic fitting.

- Closer partnerships with the Emergency Departments and Ambulance Trusts are required to manage the complex needs of some offenders especially where there is minimal facilities for healthcare on site in the police custody setting.
- All diabetics must be given food prior to insulin administration to avoid hypoglycaemic episodes.
- Injuries may be difficult to detect in the presence of alcohol if not declared by the detainee. Only accurate notes can ensure that our position is defensible if a complaint is made subsequently.
- Miscarriage may be associated with opiate withdrawal therefore careful management of this group needs to be considered.
- Need to consider low threshold for treating alcohol dependent individuals with diazepam. We are presently considering rectal diazepam to be part of formulary.

4.2.2. Prescribing

- Standard Operating Procedures (SOPS) have been written: all medications must be checked to confirm current prescription (Table 4)

Table 4
Break down of clinical incidents – 38 prescribing.

8 × Own medications	8 detainees were given medication brought from home which was out of date, not in their name, or the incorrect dispensing information was given to custody.
6 × Poor handover to custody	6 detainees had medication that was incorrectly written up or absent on the police paperwork. This makes it impossible for custody to administer correctly.
4 × Controlled drugs (Schedules 1–3)	4 detainees were given medication authorised by an FME over the phone.
4 × Insulin	4 detainees were given insulin following telephone authorisation by the FME over the phone.
3 × Detention officers	3 detainees were given the wrong person's medication
3 × Dispensing errors	3 detainees were dispensed the incorrect medication, which was noticed by the custody staff i.e. paperwork stated diazepam but dihydrocodeine was in the bag.

Any incident that has occurred more than once has been included in this thematic review.

- All details of medication should be entered onto NSPIS/police record system although it is recognised that the current NSPIS system has design faults especially with regard to the medication sheets.
- A written handover should always be supported with a verbal handover to the custody sergeant.
- All controlled drugs (Schedules 1, 2, & 3) are required under PACE to have a doctor supervise the administration.
- All insulin administration should be supervised by an HCP/FME and must be only be given following a blood glucose check and a meal.
- It was recognised that police medicines management was of variable quality.

4.2.3. Health and safety

Blood Borne Virus Exposure: Three incidents resulted in blood borne virus exposure to staff through exposure to saliva and two needlestick injuries. The Policy has now been reviewed.

Four individuals faced an aggressive situation within a custody setting. All staff should be aware of personal safety issues and be guided by the custody sergeant in relation to these matters. Remembering there is no such thing as no risk.

4.2.4. Organisational

Missing equipment was a recurrent theme especially of the blood glucose monitoring equipment which also had an implications for regular calibration and ensuring that working equipment is available at all times.

Other issues were organisational when an inappropriate professional was sent to an assessment or it was felt that the assessment was not required or involved waits such as delays in inspectors authority. These require a multiagency response.

4.2.5. Positive interventions

The positive interventions included successful identification of individuals who were potentially at risk i.e. a missed hair grip in hair of potential self-harmer. Other positive interventions were commendations based around communication skills and excellent management of situations.

4.2.6. Professional

Poor communication and incomplete paperwork were cited by custody as the commonest reasons to complain about our staff.

4.2.7. Ethical considerations

This study was a review of anonymised complaints and therefore ethical approval was not sought.

5. Discussion

This is the first study to describe provision of clinical forensic medical care to detainees in police custody using a multidisciplinary team of doctors, nurses and paramedics. The use of a mixed healthcare professional service delivery using external commercial service providers has recently been criticised as a more expensive way for provide healthcare[33] so it is essential to monitor any new service provision to ensure quality and value for money.

The break down of types of assessments required in custody demonstrates the majority of calls can be managed by appropriately trained healthcare professionals and that a response time for the majority of detainees being seen with an hour is achievable. This is despite the rural locations and large distances between custodies that the service presently covers. FMEs, who are a limited resource, are able to carry out the more specialised assessments which require their expertise. A previous study has given a break down of workloads, but due to the difficulties in categorising workload, a direct comparison was impossible, but drugs and alcohol play a major role in custody healthcare.[34]

159 critical incidents, complaints and positive interventions were made as a result of 83,981 patient/detainee episodes (0.2%), which suggest that the model of care is safe and effective. However this analysis reveals problems in extrapolating data. It is recognised that the figures under represent how many critical incidents may have occurred as, by comparison, previous research looking at FMEs has estimated a rate of 0.06% of very serious near misses.[35]

Although, many forces have internal reporting procedures, risk analysis and implementation of recommendations, presently these are not shared. It is well recognised that many incidents involve contact with multiple agencies and should be shared within all organisations. Lessons Learned, the publication of clinical incidents is shared with all agencies that request it, including all forces.

A more effective reporting system should be established between the police force and custodial medical services so that both parties can develop strategies for protecting detainees as recently recommended in an Independent Police Complaints Commission report.[35]

5.1. Key messages

- A robust reporting structure for clinical incidents – near misses/successful interventions is in place.
- Important lessons have been learnt and action taken.
- "Lessons Learned" publication has proved a successful mechanism to disseminate learning outcomes.
- Work needs to be undertaken to further encourage incident reporting.
- The database will be extended to include severity of event and healthcare professional involved in the incident.

Conflicts of Interest

VW, ST, JR, GG are employees of G4SFMS.

AC was a director of EMFS and is now providing consultancy services to G4SFMS; he is a forensic medical examiner (Tier 1) to the Metropolitan Police Service.

MS provides paid consultancy services to G4SFMS and G4S; she is the academic dean of the Faculty of Forensic and Legal Medicine; is a forensic medical examiner (Tier 2) to the Metropolitan Police Service and the Medical Director of Forensic healthcare Services; and an Honorary Senior Lecturer at St George's, University of London.

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EMFS.

Ethical Approval

None declared.

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